

Applicant(s): ~~John G. Spakousky~~

Docket No.

6479

Serial No.

09/390,485 JUL 30 2003

Filing Date

September 7, 1999

Examiner

P. Tran A

Group Art Unit

3637

Invention:

COMPOSITE BUILDING BLOCK WITH CONNECTIVE STRUCTURE

I hereby certify that the following correspondence:

Transmtl Ltr (1, in triplicate); Fee Trans (1, in triplicate); Appellant's Brief (36, in triplicate); Appendix (3 spiral bound books, including Pending Claims, U S Patents 5704180, 5570552, 1567430, 1226214, 510720, 36009 Patent 730009 with Engl Trans & Cert Ltr; and Decl of S. P. Samaha w/3 colored photos; Check No. 961308 for \$100; Rcpt Pstcard

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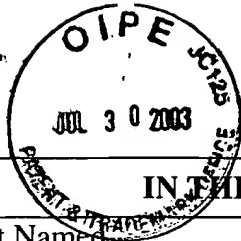
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Docket: 6479

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: John G. Spakousky

Application No.: 09/390,435

Filing Date: September 7, 1999

Title: **COMPOSITE BUILDING BLOCK WITH
CONNECTIVE STRUCTURE**

Examiner:

Group Art Unit: 3637

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GROUP 3600**APPEAL BRIEF TRANSMITTAL LETTER**Express Mail mailing label number: EV 324256627 USDate of Deposit: 30 July 2003**Mail Stop Appeal Brief - Patents**

Commissioner for Patents

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KrisAnne Popovits

Name

Signature

Dear Sir:

Transmitted herewith, in triplicate, is the Appeal Brief in this application, with respect to the Notice of Appeal mailed on May 27, 2003, and received at the Office on May 30, 2003.

Enclosed is our check No. 961308 in the amount of \$160 for filing this Appeal Brief. Also enclosed herewith is the Fee Determination, in triplicate, and the return receipt postcard.

Any deficiency or overpayment should be charged or credited to Deposit Account No. 04-1420. This transmittal is being submitted in triplicate.

Respectfully submitted,

DORSEY & WHITNEY LLP
Customer Number 25763Date: July 30, 2003

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FEE DETERMINATION (After Amendment of Claims)

Complete if Known

Application No. 09/390,435
Filing Date September 7, 1999
First Named Inventor John G. Spakousky
Group Art Unit 3637
Examiner Name P. Tran A
Atty. Docket Number 6479

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Claims as Amended in Response to Office Action dated: 02/25/2003

METHOD OF PAYMENT (Check One)		AMENDMENT FEE CALCULATION (Continued)			
1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any over payments to: Deposit Account No.: 04-1420 Deposit Account Name: <u>DORSEY & WHITNEY LLP</u> <input checked="" type="checkbox"/> Charge any additional fee required under 37 C.F.R. 1.16 and 1.17 <input checked="" type="checkbox"/> Applicant claims small entity status (see 37 C.F.R. 1.27)		3. ADDITIONAL FEES			
2. <input checked="" type="checkbox"/> Check Enclosed		Large Entity Fee	Small Entity Fee	Fee Description	Fee Paid
		110	55	Extension for reply within first month	
		410	205	Extension for reply within second month	
		930	465	Extension for reply within third month	
		1,450	725	Extension for reply within fourth month	
		1,970	985	Extension for reply within fifth month	
		1,300	650	Issue Fee-Utility/Reissue	
		320	160	Notice of Appeal	
		320	160	Filing brief in support of appeal	\$160.00
		280	140	Request for oral hearing	
		110	55	Terminal Disclaimer Fee	
		110	55	Petition to revive – unavoidable	
		1,300	650	Petition to revive – unintentional	
		130	130	Petitions to the Commissioner	
		180	180	Submission of IDS	
		750	375	Request for Continued Examination (RCE)	
		Other fee (specify):			
		Subtotal (2) \$160.00			
		Total Amount of Payment: \$160.00			

1. EXTRA* CLAIM FEES				
Claims Remaining after Amendment	Highest Number Previously Paid for	Present Extra	Fee from Below*	Additional Fee
Total	-	=	x	=
Indep.	-	=	x	=
First Presentation of Multiple Dependent Claim		x	=	
Subtotal (1)				

*Calculation of Extra Claim Fees		
Large Entity Fee	Small Entity Fee	Fee Description
18	9	Claims in excess of 20
84	42	Independent claims in excess of 3
280	140	Multiple dependent Claim
84	42	Reissue independent claims over original patent
18	9	Reissue claims in excess of 20 and over original patent

Submitted by:

CUSTOMER NUMBER

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Atty. Docket No.: 64796

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

John G. Spakousky

Appln. No.: 09/390,435

Filed: September 7, 1999

For: Composite Building Block With Connective Structure

Examiner: P. Tran A

Group Art Unit: 3635

APPELLANT'S BRIEF

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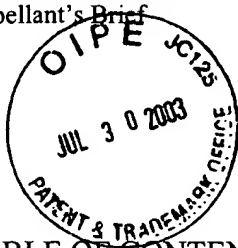


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TABLE OF CASES AND OTHER AUTHORITIES

U.S. Supreme Court

Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966).

Federal Circuit and Predecessors

Trintec Industries, Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295 (Fed. Cir. 2002).

McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351 (Fed. Cir. 2001).

In re Haruna, 249 F.3d 1327, 1335 (Fed. Cir. 2001).

Ruiz v. A.B. Chance Co., 234 F.3d 654, 667 (Fed. Cir. 2000).

Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25 (Fed. Cir. 2000).

Ecolochem, Inc. v. Southern California Edison Co., 227 F.3d 1361, 1376 (Fed. Cir. 2000).

Winner International Royalty Corp. v. Wang, 202 F.3d 1340, 1349-50 (Fed. Cir. 2000).

Tec Air, Inc. v. Denso Manufacturing Michigan, Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999).

In re Royka, 490 F.2d 981, 985 (C.C.P.A. 1974).

In re Wilder, 429 F.2d 447, 450 (C.C.P.A. 1970).

Manual of Patent Examining Procedure

MPEP § 2131.

MPEP § 2142.



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Atty. Docket No.: 6479

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:)	
)	
John G. Spakousky)	Examiner: P. Tran A
)	
Appln. No.: 09/390,435)	Group Art Unit: 3635
)	
Filed: September 7, 1999)	
)	
For: Composite Building Block With Connective Structure)	
_____)	

APPELLANT'S BRIEF

This appeal is taken in response to the Final Office Action of February 25, 2003, wherein all of the pending claims of U.S. Patent Application No. 09/390,435¹ were finally rejected.

Real Party In Interest

The real party in interest is Pentstar Corporation as evidenced by the Assignment recorded at Reel 012685, Frame 0246.

Related Appeals And Interferences

There are no appeals or interferences related to this appeal.

Status Of Claims

Claims 1-15, 17-21, 24, 35, 38, 40, 41, and 45-52 are pending. All of these pending claims are under final rejection. Specifically, the Final Office Action rejected:

- (a) claims 1-15, 17-21, 35, 38, and 40-41 under 35 U.S.C. § 112, Second Paragraph;
- (b) claims 17, 21 and 24 under 35 U.S.C. § 102(b); and

¹ This application is a continuation-in-part of U.S. Patent Application Serial No. 08/795,691, issued November 16, 1999 as U.S. Patent No. 5,983,585, and is the parent application for U.S. Patent Application Serial No. 09/758,845 filed January 11, 2001 and still pending.

(c) claims 1-5, 10-14, 19-20, 35, 38, 40-41, 45-52 under 35 U.S.C. § 103(a).

The Final Office Action also objected to claim 6-9, 15 and 18 as being dependant upon a rejected base claim, but stated these would be allowable if rewritten into independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-15, 17-21, 24, 35, 38, 40, 41, and 45-52 are appealed. A copy of the appealed claims appears in the Appendix.

Status Of Amendments

To bring the claims into accordance with 37 C.F.R. § 1.126, in the Final Office Action the Examiner renumbered previously-added claims 42-49 to become claims 45-52. The attached claims reflect the corrected claim numbers. Applicant has filed no amendment in response to the final rejection.

Summary Of Invention

In one embodiment, the present invention relates to a discrete, preassembled block unit for use in a wall. In another embodiment, the invention relates to a connective structure for forming a discrete, preassembled, composite block unit for use in a wall. Finally, in another embodiment, the present invention pertains to a method for making a discrete, preassembled, composite block unit for use in a wall.

More specifically, the discrete, preassembled, composite block unit is for independent placement as a unit with other laterally and vertically adjacent units to form a mortared wall structure. *Specification As Filed, p. 4, ll. 14; p. 5, ll. 3-5; Figures 2, 3, 7, 8 & 15a.* The block unit includes a first wall and a second wall, at least one of which is load bearing for vertical loads and made from a first, masonry-type material. *Specification As Filed, p. 4, ll. 15-17; p. 14, ll. 1 & 7-8.* Each wall has at least one mortar receiving surface for forming a mortar joint with said adjacent block units. *Specification As Filed, p. 10, ll. 9-10, p. 12, ll. 19-20; Figures 7, 8 & 14.*

The connective structure is formed of a second, non-masonry-type material and connected between the first and second walls. *Specification As Filed*, p. 8, ll. 9-11; p. 11, ll. 3-8; *All Figures*. The connective structure has at least two connectors. *Specification As Filed*, p. 15, ll. 4-16; *Figure 15a*. Each of the connectors is connected to one of the first and second walls, such that prior to placement of the block unit in a wall structure, the first and second walls are securely positioned with respect to one another as opposite faces of a discrete, substantially rectangular block, each face having a face area. *Specification As Filed*, p. 4, ll. 14; p. 5, ll. 3-11; *Figures 2, 3, 7, 8 & 15a*. The connective structure is such that when the block is assembled and in a wall structure, the connective structure is free of direct, structural connection to any wall of each adjacent block unit. *Figures 4, 7, 8, 14, 15b & 15d*. The connective structure comprises arms supporting the at least two connectors, and the arms provide a thermal conduction path of limited vertical cross-sectional area relative to either wall face area. *Figures 2, 3, 4, 7, 8 & 15a*.

Issues

(i) Do the terms “mortared wall structure,” “mortar receiving surface,” and similar terms cause claims 1-15, 17-21, 35, 38, and 40-41 to be indefinite under 35 U.S.C. § 112, Second Paragraph?

(ii) Are the inventions defined in claims 17, 21 and 24 anticipated by U.S. Patent 5,704,180 to Boeck (“Boeck”), under 35 U.S.C. § 102(b)?

(iii) Are the inventions defined in claims 1-5, 10-11, 35, 38, 40-41, 45-47, 50, and 52 obvious over U.S. Patent 5,570,552 to Nehring (“Nehring”) in view of U.S. Patent 1,226,214 to Hopkins (“Hopkins”), under 35 U.S.C. § 103(a)?

(iv) Is the invention defined in claim 14 obvious over Nehring in view of Hopkins, and further in view of U.S. Patent 510,720 to Stewart Jr. (“Stewart”), under 35 U.S.C. § 103(a)?

(v) Are the inventions defined in claims 1, 12 and 13 obvious over Stewart in view of Nehring, under 35 U.S.C. § 103(a)?

(vi) Are the inventions defined in claims 19-20 obvious over Boeck in view of French Patent 730,009 to Murier ("Murier"), under 35 U.S.C. § 103(a)?

(vii) Are the inventions defined in claims 45, 46, 48, 49 and 51 obvious over Stewart in view of Nehring, under 35 U.S.C. § 103(a)?

Grouping Of Claims

The claims do not stand or fall together.

Argument

To provide a better understanding of, and appreciation for, Applicant's claimed invention, the following background information is being provided. Discussions fully addressing each rejection of the Final Office Action follow immediately after this background information.

The present inventions relate to masonry block units for wall construction. The primary qualities of interest in a wall are: its load-bearing capability (i.e., structural strength) for bearing various loads superimposed on the wall; its insulation value, if used for a wall separating environments having different ambient temperatures (e.g., an exterior wall); its aesthetic features, if it will not be covered by a finish layer; and its cost, both in labor and materials, for constructing the basic wall and adding any finishes to achieve the desired aesthetics.

In the past, concrete blocks (also known as concrete masonry units ("CMU") or cinder blocks) molded entirely from concrete have been widely used for walls. These have parallel front and rear faces that are generally integrally formed with webs joining them. See, e.g., U.S. Patent 1,567,430. They are laid in stacked rows or horizontal runs. Conventional mortared masonry joint installation techniques, with mortar joints connecting vertically adjacent top and bottom surfaces and laterally adjacent end surfaces, are used. The openings within such blocks

are sometimes filled with concrete to add additional wall strength or with insulation, to improve the insulating qualities of the wall. However, the webs between the front and rear faces provide a relatively favorable path for thermal transfer, resulting in poor insulation value for the block wall. To improve the aesthetics of the concrete that forms both front and rear faces, a concrete block wall may have a brick or other cosmetic layer placed in front of it. Insulation may also be added between the cosmetic layer and the block wall. The resulting double wall has improved features but involves the labor and material costs of two walls.

Also known in the prior art are a variety of forms systems for creating poured concrete walls. The form elements may be wood, metal or other materials sufficient to resist the forces when the form is filled with fluid concrete. The form elements may be removed after concrete curing or left in place, depending on the finished wall features needed and the cost of form elements. More recently, foamed plastic materials have been employed in the vertical panels of forms. See e.g., U.S. Patent No. 5,704,180. These are light, yet with sufficient interconnection can resist a concrete pour. If left in place, the foam can provide insulating value to the resulting wall (although it will require a protective layer when exposed). Each of the many form systems, whether foam-walled or otherwise, involves its own structural intricacies in assembling the forms at the pour site, depending on the elements used to form the vertical panels and their interconnections.

Appellant's invention is an improvement over both of these prior approaches to building walls. It starts from the proposition that techniques for conventional block laying are familiar to the many currently-active masons, as are the costs. The load bearing qualities of masonry blocks with and without added, poured concrete are also known. Appellant's invention utilizes these

knowns, to provide a block unit laid by conventional techniques, but seeks to improve on the installed cost and qualities of that unit and the performance of the resulting finished wall.

This is done by making a composite block unit using both masonry and non-masonry materials that is pre-assembled as a unit before installation. Masonry materials with load bearing capacity are used for at least one face. The other face may be, but is not required to be, masonry. Non-masonry materials are used to form a connective structure between the faces. Because the faces are not formed integrally with each other and their connecting webs, the two can be of different materials or the same material with different aesthetic effects (e.g., color, surface texture). To allow the block unit to be installed in a wall by conventional masonry installation techniques, the connective structure rigidly and securely joins the faces to form a discrete block unit. From an installation viewpoint, the block unit offers a rigidity that is similar to a conventional, integrally-formed concrete block. It can be placed with conventional mortar joints connecting it to adjacent blocks of the same type or to conventional blocks made to the same basic dimensions. The skills of presently active masons can be used. However, the connective structure, not being formed of masonry, provides better energy transmission resistance than concrete webs and produces a lighter block.

The non-masonry connective structure also allows a variety of features within the wall structure to be realized. Insulation may be supported on the connective structure (see Appellant's Figs. 17a-17b). A partitioning panel in the connective structure can facilitate the wall's use as a form for poured concrete, enhancing its inherent load bearing strength with the cured concrete (see Appellant's Specification as Filed, p. 5, ll. 13-14; p. 10, ll. 16-17). The result of the combination of elements and their relationship is a discrete block unit installed with conventional methods (i.e., simple mortar joints are used) to provide conventional masonry wall

load bearing strength and the ability to serve as a form for poured concrete, while also offering improved insulation and finish capabilities. The jobs of presently active masons are preserved by its use. For further information on the invention, including pictures of the block unit during installation, see Declaration of Stephen P. Samaha, accompanying Appellant's Amendment and Response, dated November 12, 2002. (For convenience, a copy of this Declaration is included in the Appendix).

(i) Claim Rejections - 35 U.S.C. § 112, Second Paragraph

(a) *Rejection of claims 1-15, 17-21, 35, 38, 40-41 as indefinite.*

- (1) **The indefiniteness rejection should be withdrawn because the specification as filed and Figures 7, 8 and 14 clearly define what is meant by the terms “mortared wall structure” and “mortar receiving surface.”**

The Final Office Action rejected claims 1-15, 17-21, 35, 38, and 40-41 under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Final Office Action states that the terms “mortared wall structure” and “mortar receiving surface” are confusing. The Appellant respectfully disagrees.

Those of ordinary skill in the art of conventional masonry block installation would understand from the specification as filed and Figures 7, 8 and 14 that “mortar receiving surface” means those surfaces on a masonry block that receive mortar when forming a mortar joint with an adjacent masonry block. “Mortared wall structure” would be understood by those of ordinary skill in the art to mean a wall constructed of masonry units mortared together. For example, as shown in Figures 7, 8 and 14, “[m]ortar 100 is applied to the outer and inner walls [of a composite block unit] to form a tight joint between the [adjacent] blocks.” *Specification As Filed*, p. 10, ll. 9-10; *Figures 7, 8 & 14*.

The terms “mortared wall structure” and “mortar receiving surface” are not recited to claim mortar in the structure or on the discrete, preassembled, composite block unit. The terms “mortared wall structure” and “mortar receiving surface” are recited to clarify that the discrete, preassembled, composite block unit is designed to be independently placed in a wall as a unit and secured in place via mortar joints with adjacent composite block units (or other masonry blocks), thereby forming a “mortared wall structure.” In other words, the composite block unit is capable of being installed using block and mortar methods conventionally used by masons.

The specification as filed and Figures 7, 8 and 14, showing mortar 100 between independently placed block units, make it clear to persons skilled in the art what is meant by the terms “mortared wall structure” and “mortar receiving surface.” Therefore, Appellant respectfully submits that the indefiniteness rejection should be withdrawn.

(ii) Claim Rejections - 35 U.S.C. § 102(b)

(a) *Rejection of claims 17, 21 and 24 as anticipated by Boeck.*

- (1) **The anticipation rejection based on Boeck should be withdrawn because Boeck fails to disclose various elements of independent claim 17, including the connective structure’s “compressible element” and its being “free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure.”**

The Final Office Action rejected claims 17, 21 and 24 under 35 U.S.C. § 102(b) as being anticipated by Boeck. It is respectfully submitted that this rejection should be withdrawn, because Boeck fails to disclose each claim element.

For a prior art reference to anticipate a patent claim, the reference must expressly or inherently describe each and every limitation set forth in the patent claim. Trintec Industries, Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295 (Fed. Cir. 2002); MPEP § 2131. “Inherent anticipation requires that the missing descriptive material is ‘necessarily present,’ not merely

probably or possibly present, in the prior art.” Trintec, 295 F.3d at 1295. Every claim limitation positively recited must be given effect. In re Wilder, 429 F.2d 447, 450 (C.C.P.A. 1970).

Appellant's independent claim 17 in part recites, “[a] connective structure for forming a **discrete, preassembled, composite block unit for independent placement as a unit mortared with other laterally and vertically adjacent units to form a mortared, masonry wall structure**, each block unit having a first wall and a second wall, ... at least one of which is **load-bearing** for vertical loads, comprising: a plurality of elements forming arms and connectors ..., **each connector with a compressible element** for insertion into and frictional engagement with one of said first and second walls to securely position said walls with respect to one another as opposed faces; wherein **the connective structure is ... free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure.**”

Boeck discloses “[a] concrete form system in which a plurality of **foam** panels are **interlocked transversely, horizontally, and vertically** by a plurality of connectors.” Boeck, abstract. Thus, unlike claim 17, Boeck does not disclose a connector used for a “discrete, preassembled, composite block unit for independent placement as a unit.” Also, Boeck is a form system for poured concrete and makes no mention of forming a “mortared, masonry wall structure,” as recited in claim 17. Further, unlike claim 17, Boeck's form walls are made of foam and are not “load-bearing.”

As stated in Boeck,

[w]hen [Boeck's] connector 20 is fully inserted into panels 14, 16 (as seen in FIG. 1) leg portions 32", 36" and 30", 34" protrude upwardly, respectively, above panels 14, 16. Because each connector is symmetrical about the plane containing latticework 42, and because the lower ends of each panel are formed with passages each of which are identical to, vertically aligned with and coplanar with a corresponding one of the upper end passages, one can easily **vertically interlock the panels**, as best seen in FIG. 3.

Boeck, col. 5, ll. 8-16 (emphasis added). Also, as stated in Boeck,

[A] single full size connector can be used to interconnect as many as eight panels transversely, horizontally and vertically. Specifically, the two coplanar, downwardly protruding legs on one side of a full size connector can be bridged across the butted ends of two longitudinally adjacent panels. The two upwardly protruding legs on the same side of that connector can be bridged across the butted ends of another two longitudinally adjacent panels placed atop the first two panels. The same arrangement is repeated to interlock another four panels on the opposite side of the same connector.

Boeck, col. 6, ll. 29-39 (emphasis added). Thus, it is clear that Boeck does not disclose a connective structure that is “free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure,” as recited in claim 17.

Boeck's connector, as illustrated in FIG. 4, has “**planar members 30, 32, 34, 36**” for insertion into the passages 58 in the expanded polystyrene foam panels 10, 12, 14, 16. Boeck, col. 3, ll. 50-52; col. 4, ll. 60-64; FIGS. 1, 4 & 5. These “planar members” simply slide into the passages in the foam panels. Boeck does not teach that its “planar elements” are compressible. Thus, Boeck does not disclose **each connector with a compressible element**, as recited in independent claim 17.

As with most form systems, Boeck has connectors and wall pieces with their own structural intricacies and interconnections as described above, which are quite unlike the features of Applicant's connector as recited in independent claim 17. For at least these reasons, it is respectfully submitted that the Final Office Action fails to establish a prima facie case of anticipation for independent claim 17 and its dependent claims 21 and 24.

(iii) Claim Rejections - 35 U.S.C. § 103(a)

In order for a combination of references to establish a prima facie case of obviousness, three requirements must be met. First, there must be some suggestion, teaching, or motivation to combine the reference teachings, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25 (Fed. Cir. 2000); MPEP § 2142. Second, there must be a reasonable expectation of success for the combination. Id. Third, when combined, the prior art references must teach or suggest all the claim limitations. In re Royka, 490 F.2d 981, 985 (C.C.P.A. 1974); MPEP § 2142.

(a) *Rejection of claims 1-5, 10-11, 35, 38, 40-41, 45-47, 50, and 52 as obvious over Nehring in view of Hopkins.*

The Final Office Action rejected claims 1-5, 10-11, 35, 38, 40-41, 45-47, 50, and 52 under 35 U.S.C. § 103(a) over Nehring in view of Hopkins. It is respectfully submitted that this rejection should be withdrawn, because Nehring teaches away from its combination with Hopkins, and the combination (even assuming its permissibility) fails to teach or suggest each claim element.

(1) **The obviousness rejection based on Nehring in view of Hopkins should be withdrawn, because Nehring teaches away from its combination with Hopkins.**

“The genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some ‘teaching, suggestion or reason’ to combine cited references. When the art in question is relatively simple, as is the case here, the opportunity to judge by hindsight is particularly tempting. Consequently, the tests of whether to combine references need to be applied

rigorously.” McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351 (Fed. Cir. 2001) (cites omitted).

There is no suggestion to combine if a reference teaches away from its combination with another source. Tec Air, Inc. v. Denso Manufacturing Michigan, Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999). Where a first prior art reference teaches away from a second prior art reference, this alone can defeat a claim of obviousness. Winner International Royalty Corp. v. Wang, 202 F.3d 1340, 1349-50 (Fed. Cir. 2000). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be led in a direction divergent from the path that was taken by the applicant.” In re Haruna, 249 F.3d 1327, 1335 (Fed. Cir. 2001).

In Haruna, the Federal Circuit reversed the Board of Patent Appeals’ holding of obviousness based on U.S. Patent 4,747,093 to Benne et al. (“Benne”) because Benne’s objective taught against its modification. Id. at 1336. Because of the similarities between the obviousness rejection in Haruna and the present obviousness rejection based on Nehring and Hopkins, Haruna is worth discussing in detail.

In Haruna, a design patent application had a single claim directed to an optical disk with a relatively wide transparent region between its inner metallized region and its outer rim. Id. at 1329. Benne taught an optical disk with a region between its inner metallized region and its outer rim that had color printing on one side of the disk that could be seen from the other side (i.e., one side of the disk’s outer region was transparent). Id. at 1333. Benne also taught that the substrate for its disk was initially transparent. Id. at 1335. Also, it was known that conventional disks have an outer rim that is transparent. Id. Thus, the examiner and the Solicitor for the Patent Office determined that Benne suggested a disk with a transparent outer region. Id. at 1333-35.

The Federal Circuit said:

this determination ignores the teachings in Benne that discourage a disk with the claimed design.... [T]he object of Benne is to conceal manufacturing defects in the outer zone of disks. Benne achieves this object by treating the surface of the outer zone to provide a matte finish, or a colored surface, or a pattern, or a combination thereof. Broadening the transparent region of conventional disks would defeat the purpose of Benne, because providing a transparent region would not conceal any defects, and would result in a large region in which any defects would be readily apparent. Thus, Benne teaches away from the claimed design ... [and] does not render the claimed design obvious.

Id. at 1335-36.

In the present obviousness rejection of claims 1-5, 10-11, 35, 38, 40-41, 45-47, 50, and 52 under 35 U.S.C. § 103(a) based on Nehring and Hopkins, the Final Office Action asserts that it would have been obvious to modify Nehring by replacing its lightweight plastic walls with Hopkins's masonry material because the masonry material provides good insulation, strength and is cheap to use. Final Office Action, p. 5, ll. 2-5. However, as in Haruna, in making this assertion, the Final Office Action does not consider Nehring's stated objectives, which include providing a "form of construction that utilizes expandable polystyrene material which is **lightweight**" and "a system which utilizes components which are . . . **light in weight**." Nehring, col. 2, ll. 52-54; col. 3, ll. 15-17 (emphasis added). Nehring also has the objective of providing a form that may be "**readily cut** to a specific length." Nehring, col. 3, ll. 1-2 (emphasis added).

Replacing Nehring's "light in weight" "expandable polystyrene" walls with Hopkins's heavy masonry material walls would defeat the purpose of Nehring. Also, as compared to polystyrene, masonry materials are hardly capable of being "readily cut." Thus, as in Haruna, Nehring's objectives directly teach away from its combination with Hopkins. The requisite suggestion, teaching, or motivation for the asserted combination is lacking. Therefore, it is respectfully submitted that the Final Office Action fails to establish a prima facie case of obviousness as to these rejected claims.

- (2) **The obviousness rejection based on Nehring in view of Hopkins should be withdrawn, because the combination fails to teach a “mortar receiving surface for forming a mortar joint with said adjacent block units,” as recited in the rejected claims.**

Even assuming the permissibility of the combination, Nehring and Hopkins fall short as references. Independent claim 1 in part recites, “[a] discrete, preassembled, composite block unit for independent placement as a unit with other laterally and vertically adjacent units **to form a mortared wall structure** comprising: a first wall and a second wall, . . . , **each said wall having at least one mortar receiving surface for forming a mortar joint with said adjacent block units.**” Similarly, independent claim 35 in part recites, “[a] discrete block unit for independent placement as a unit with other laterally and vertically adjacent units **to form a mortared wall structure** comprising: a first wall and a second wall, . . . , **each said wall having at least one mortar receiving surface for forming a mortar joint with said adjacent block units.**” Finally, independent claim 45 in part recites, “[a] method for making a discrete, preassembled, composite block unit for independent placement as a unit with other laterally and vertically adjacent block units **to form a mortared wall structure**, comprising: providing a first wall and a second wall, . . . , **at least one of said walls having at least one vertical and one horizontal mortar joint surface for forming a mortar joint with at least two of the adjacent block units.**”

Nehring discloses a modular wall construction system with sidewalls of expanded foam plastic material. Nehring, col. 4, ll. 39-47. Nehring’s plastic foam sidewalls are opposed and spaced apart to define a cavity for receiving a concrete slurry. *Id.* Nehring’s plastic sidewalls 22, 24 each have a mounting groove 70 that extends from the upper surface 30 of the plastic sidewall 22, 24 to interlock with the channel member 78 in the lower surface 32 of the sidewall above. Nehring, col. 6, ll. 7-40; FIGS. 1, 4, 4A & 4B. Nehring’s mounting groove 70 and

channel member 78 help to achieve Nehring's objective, which "is to provide a block form . . . that includes **means for interlocking stacked forms without requiring mortar** or any other binder **interposed between the juxtaposed block forms.**" Nehring, col. 2, ll. 56-61 (emphasis added). Thus, it is clear that Nehring does not teach or suggest walls "having at least one mortar receiving surface for forming a mortar joint with said adjacent block units," as recited in independent claims 1 and 35. Also, it is clear that Nehring does not teach or suggest providing a wall "having at least one vertical and one horizontal mortar joint surface for forming a mortar joint with at least two of the adjacent block units," as recited in independent claim 45.

Hopkins discloses "construction of walls and slabs by pouring concrete into permanent molds formed by previously manufactured blocks, preferably of concrete." Hopkins, p. 1, col. 1, ll. 8-10. Figures 1-11 show the "blocks" that Hopkins uses to form the poured wall of Figure 1. Each outer face block 1 is joined to an opposed inner face block 2 with a series of connecting blocks 3, 4, 5, 6, which maintain the integrity of the wall against slippage of any one opposed pair of inner and outer blocks 1, 2 relative to an adjacent pair. Hopkins has no teaching or suggestion of any mortar receiving surfaces for inter-block mortar joints.²

Neither Nehring nor Hopkins teach or suggest walls "having at least one mortar receiving surface for forming a mortar joint with said adjacent block units," as recited in independent claims 1 and 35. Also, neither Nehring nor Hopkins teach or suggest providing a wall "having at least one vertical and one horizontal mortar joint surface for forming a mortar joint with at least two of the adjacent block units," as recited in independent claim 45.

² It should be noted that even if Hopkins or another reference taught or suggested inter-block mortar joints, it would be improper to modify Nehring by combining it with such a reference because Nehring's objective teaches away from mortar receiving surfaces. Specifically, Nehring's stated objective "is to provide a block form . . . that includes **means for interlocking stacked forms without requiring mortar** or any other binder **interposed between the juxtaposed block forms.**" Nehring, col. 2, ll. 56-61 (emphasis added). Thus, it would not be obvious to modify Nehring to have mortar receiving surfaces.

Claim 38 depends on independent claim 35 and further comprises **“an insulating mass having approximately the same height and width dimensions as the first and second walls that is “secured and held by the connective structure.”** Similarly, claim 52 depends on independent claim 45 and further comprises **“providing on the connective structure an insulating element of a size substantially equal to the area of the first wall or the second wall.”** No such teachings of an insulating mass or element appear in Hopkins or Nehring.

The Final Office Action refers to “42A” in Nehring’s FIG. 4A as being the insulating mass. However, “42A” is simply a lengthened version of bridge member 42 (see Nehring col. 6, lines 44-55). As is clear from Nehring’s specification and FIGS. 1, 4, 4A and 4B, element 42A does not have “approximately the same height and width dimensions as the first and second walls” or serve as “an insulating element of a size substantially equal to the area of the first wall or the second wall.” Also, no other aspect of Nehring or Hopkins fulfills these elements of claims 38 and 52.

- (3) **The long felt but unresolved need for a masonry unit that offers enhanced finished wall performance while using conventional block installation strongly indicates the nonobviousness of Appellant’s invention.**

Secondary considerations such as long felt but unsolved need may have relevancy as indicia of obviousness or nonobviousness. Ecolochem, Inc. v. Southern California Edison Co., 227 F.3d 1361, 1376 (Fed. Cir. 2000) (citing Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966)). When these secondary considerations are present, they must be considered in determining obviousness. Ruiz v. A.B. Chance Co., 234 F.3d 654, 667 (Fed. Cir. 2000).

Appellant’s invention, as recited in independent claim 1, is directed to “[a] discrete, preassembled, composite block unit for independent placement as a unit with other laterally and vertically adjacent units to form a mortared wall structure.” The block has “a first wall and a

second wall, ... each said wall having at least one mortar receiving surface for forming a mortar joint with said adjacent block units.” The block also has “a connective structure formed of a second, non-masonry-type material and connected between the first and second walls, said connective structure having at least two connectors.” “[E]ach of the connectors is connected to one of the first and second walls, such that prior to placement of the block unit in a wall structure the first and second walls are securely positioned with respect to one another as opposite faces of a discrete, substantially rectangular block.” Claims 38 and 45 have similar language.

Masonry building blocks, such as concrete masonry units (i.e., CMU's or cinder blocks), have existed for many years, as evidenced by U.S. Patent 1,567,430 to Eberling, which issued December 29, 1925. Since their inception, cinder blocks have been heavy, difficult to grip, and, as a result, challenging for the average mason to maneuver into position with one hand while mortaring with the other. A significant amount of the maneuverability difficulty associated with a cinder block stems from its masonry-type material webs that interconnect the side walls of the cinder block.

There has been a long-felt but unsolved need for a discrete, individually-placeable block unit that is for use in a mortared wall structure and is more easily maneuvered into position by an average mason. Appellant's block unit with a lightweight connective structure formed of a non-masonry material responds to this need. Despite the large number of structures that have been built with masonry building blocks, this long-felt need had remained unsolved until the arrival of Appellant's invention.

Where a wall is constructed of masonry building blocks, such as cinder blocks, and one side of the wall is to have a surface appearance that differs from the other side of the wall, it has been the construction practice, since the advent of cinder blocks, to place a veneer over the

cinder block wall. For example, on an exterior wall, the architect may desire a granite block look on the exterior surface and accept a standard cinder block look on the interior surface. To achieve these looks on a cinder block wall, the wall would require applying a granite veneer on the exterior of the completed block wall, or the wall would have to be built as two immediately adjacent walls, the interior wall being built of cinder blocks and the exterior wall being built of granite blocks.

Veneer or double wall construction presents at least two significant disadvantages. First, the veneer or double wall adds significant expense to the construction costs of the wall. Second, the extra thickness of a veneered or doubled wall decreases the usable square footage of the structure.

There has been a long-felt but unsolved need for a means of achieving different wall surfaces on a masonry building block wall without having to resort to veneer or double wall construction. Appellant's composite block unit as claimed in claims 1, 35 and 45 uses a non-masonry connector to join two faces that no longer need to be integrally formed. Thus, conventional masonry block construction of a single block wall can yield separate face surfaces as in a veneered or double wall. Again, despite the large number of structures that have been built with masonry building blocks, this long-felt need had remained unsolved until the arrival of Appellant's invention.

Form systems for poured concrete walls have existed for many years, as evidenced by U.S. Patent 1,226,214 to Hopkins, which issued May 15, 1917. Since their inception, these form systems have been erected by individually placing wall pieces at the wall site and then interlocking the wall pieces together via connective elements.

Reinforced, monolithic-poured concrete walls typically offer superior strength and penetration resistance as compared to walls built with hollow block such as cinder blocks. The strength and penetration resistance of a concrete wall is especially desirable when the building could be subjected to an explosion resulting from an industrial accident or terrorist act.

Until Applicant's invention, poured concrete walls would lack the aesthetic look of a masonry block wall unless built with labor intensive methods similar to those disclosed in Hopkins or covered with a separate masonry veneer layer. Although these labor intensive methods might result in a wall that looked like a masonry block wall, these walls could not be built with traditional masonry block laying methods. Thus, there was a long-felt but unsolved need for "[a] discrete, preassembled, composite block unit for independent placement" that had a configuration that allowed the block to be used in traditional masonry block laying methods and that resulted in a wall with the strength of a poured concrete wall and the aesthetic look of a masonry block wall.

Despite the large number of masonry block walls and poured concrete walls built over the years, only Applicant's invention, as recited in independent claim 1³ and similarly recited in claims 35 and 45, solves this long-felt but unsolved need.

The fact that Appellant's block unit successfully addresses all these long felt needs in wall construction strongly indicates Appellant's invention is nonobvious.

³ "[a] discrete, preassembled, composite block unit for independent placement as a unit with other laterally and vertically adjacent units to form a mortared wall structure comprising: a first wall and a second wall, ..., each said wall having at least one mortar receiving surface for forming a mortar joint with said adjacent block units."

(b) Rejection of claim 14 as obvious over Nehring in view of Hopkins and further in view of Stewart.

The Final Office Action rejected claim 14 under 35 U.S.C. § 103(a) over Nehring in view of Hopkins and further in view of Stewart. It is respectfully submitted that this rejection should be withdrawn, because Nehring teaches away from its combination with Hopkins and Stewart, and the combination fails to teach or suggest each claim element.

- (1) The obviousness rejection based on Nehring in view of Hopkins and further in view of Stewart should be withdrawn because the combination fails to teach a “discrete, preassembled, block unit for independent placement as a unit with other laterally and vertically adjacent units to form a mortared wall structure” and a “connective structure [that] is free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure.”**

The Final Office Action asserts as to claim 14: “Nehring as modified [by Hopkins] shows all the claimed limitations except for the connections being received in a dovetail formation.” The Final Office Action further asserts that “Stewart Jr. discloses dovetail shaped connectors being received in dovetail shape formation” and that “[i]t would have been obvious ... to modify Nehring’s modified structure to show the connectors being received in a dovetail-shaped formation because the dovetail connectors would enable the connecting of walls together as taught by Stewart Jr.” Final Office Action, page 7, para 8.

Stewart discloses a system of tiles that may be connected to form a wall into which concrete may be poured. Stewart, p. 1, col. 1, ll. 14-31; Fig. 1. The tiles, such as the side and corner pieces 10, 16, make up the outside surfaces of the wall. Stewart, p. 1, col. 1, ll. 31-34; Fig. 1. The side pieces 10, 16 are maintained in position relative to each other via a series of cross pieces 12, tie bars 20, and braces 15, 15a, 15b. **In Stewart, it is the cross pieces 12, 20 that “tie the opposite side pieces firmly together.”** Stewart, p. 1, col. 1, ll. 48-49; Fig. 1

(emphasis added). Thus, in Stewart, it is the cross pieces 12, 20 that serve as its connective structure, not the braces 15, 15a, 15b.

Claim 14 recites, “at least one connector ... is received in a **dovetail-shaped connector formation in the first or second wall.**” Cross pieces 12, 20 are the only connecting pieces in Stewart with a dovetail shape. Although Stewart’s first and second walls have dovetail-shaped formations for receiving the dovetail-shaped ends on cross-pieces 12, 20, the dovetail-shaped wall formations are formed at the joint between two laterally adjacent sidewalls, i.e., extending across a seam between tiles. Stewart, Figs. 1 and 6. The dovetails appear to be part of the design for connection of adjacent side pieces 10, 16, 19. Thus, connecting the walls together as taught by Stewart’s dovetail components would occur only as the tile pieces for two adjacent blocks are assembled in a wall structure and would not result in a “**preassembled**” **block that is suitable “for independent placement as a unit.”** Thus, Stewart’s dovetails on tile pieces 12, 20 do not provide a “**connective structure [that] is free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure,**” as recited in claim 1 on which claim 14 depends.⁴

For at least these reasons, it is respectfully submitted that in combining Stewart with Nehring and Hopkins, the Final Office Action has not provided a teaching that covers all elements of claim 14 and its base claim 1 and therefore fails to establish a prima facie case of obviousness against claim 14.

⁴ It should be noted that Stewart’s central cross-braces 15, 15a, 15b, which do not connect to adjacent blocks, by contrast to cross pieces 12, 20, do not have the dovetail connections. So there is no teaching of dovetail connections in that context.

(2) The obviousness rejection based on Nehring in view of Hopkins and in further view of Stewart should be withdrawn because Nehring teaches away from its combination with Hopkins and Stewart.

As noted in preceding section (iii)(a)(1), the Federal Circuit has said that the tests used to determine whether to combine references need to be applied rigorously. Furthermore, the Federal Circuit has said that there is no suggestion to combine if a reference teaches away from its combination with another source, and, more specifically, where a first prior art reference teaches away from a second prior art reference, this alone can defeat an claim of obviousness.

As explained in preceding section (iii)(a)(1), replacing Nehring's "light in weight" "expandable polystyrene" walls with Hopkins's heavy masonry material walls would defeat the stated objectives of Nehring. Also, as compared to polystyrene, masonry materials are hardly capable of being "readily cut." Thus, Nehring's objectives directly teach away from its combination with Hopkins, and the requisite suggestion, teaching, or motivation for the combination is lacking. This reasoning also applies equally to Stewart, with its tile components that are heavy and not as readily cut as foam. Stewart provides no teaching that makes its tiles combinable with Nehring. Therefore, it is respectfully submitted that the Final Office Action fails to establish a prima facie case of obviousness.

(c) Rejection of claims 1, 12 and 13 as obvious over Stewart in view of Nehring.

The Final Office Action rejected claims 1, 12 and 13 under 35 U.S.C. § 103(a) over Stewart in view of Nehring. It is respectfully submitted that this rejection should be withdrawn, because the combination fails to teach or suggest each claim element.

- (1) **The obviousness rejection based on Stewart in view of Nehring should be withdrawn, because the combination fails to teach a “connective structure [that] is free of direct structural connection to any wall of each adjacent block unit when the block unit is in a wall structure,” “a discrete, preassembled, composite block unit for independent placement as a unit,” and other aspects of the claims.**

The rejection as to claims 1, 12 and 13 states that Stewart teaches or suggests all aspects of claims 1, 12 and 13, except a connector being formed of a non-masonry material. As discussed in preceding section (iii)(b)(1), in connection with the rejection of claim 14, Stewart discloses a system of tiles that may be connected to form a wall into which concrete may be poured. Stewart, p. 1, col. 1, ll. 14-31; Fig. 1. The tiles, such as the side and corner pieces 10, 16, make up the outside surfaces of the wall. Stewart, p. 1, col. 1, ll. 31-34; Fig. 1. The side pieces 10, 16 are maintained in position relative to each other via a series of cross pieces 12, tie bars 20, and braces 15, 15a, 15b. **In Stewart, it is the cross pieces 12, 20 that “tie the opposite side pieces firmly together.”** Stewart, p. 1, col. 1, ll. 48-49; Fig. 1 (emphasis added). In other words, Stewart’s connective structure is the cross pieces 12, 20 that are used to connect the side pieces 10, 16, 19 (i.e., face tiles) “firmly together,” not the braces 15, 15a, 15b. However, as can be seen in Fig. 1 and 6 of Stewart and as was explained in preceding section (iii)(b)(1), the cross pieces 12, 20 connect to the side pieces 10, 16, 19 at the seams of laterally adjacent side pieces 10, 10 or 10, 16 or 10, 19. Thus, **Stewart’s connectors overlap at the joint between adjacent side pieces (i.e., face tiles).**

The borrowing of a teaching of a non-masonry connector still fails to negate Stewart’s basic teaching that adjacent blocks are connected via connector elements (i.e., cross pieces 12, 20) that connect to each of two laterally adjacent faces tiles (i.e., side pieces 10, 16, 19). Thus the cited combination fails to meet the language of claim 1 stating a “**connective structure**

[that] is free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure.”

For at least these reasons, it is clear that Stewart does not teach or suggest “**a discrete, preassembled, composite block unit for independent placement as a unit with other laterally and vertically adjacent units**, wherein each of the connectors is connected to one of the first and second walls, **such that prior to placement of the block unit in a wall structure the first and second walls are securely positioned with respect to one another as opposite faces of a discrete, substantially rectangular block,**” as recited in independent claim 1.

Nehring’s asserted teaching of a non-masonry connector fails to remedy Stewart’s inadequacies in this regard. Therefore, it is respectfully submitted that the Final Office Action has failed to establish a prima facie case of obviousness against independent claim 1 and its dependent claims 12 and 13.

- (2) **The long felt but unresolved need for a masonry unit that offers enhanced finished wall performance while using conventional block installation strongly indicates the nonobviousness of Appellant’s invention.**

As explained in section (iii)(a)(3) of this brief, which also addresses a rejection of claim 1, there has been a long felt need for a masonry unit that offers enhanced finished wall performance while using conventional block installation. More specifically, there has been a long-felt but unsolved need for a masonry block that decreases the need for veneer or double wall construction and allows the strength of a poured concrete wall, the aesthetic appearance of a masonry block wall, and the ability to build such a wall using traditional masonry block methods. These needs have been addressed by Appellant’s invention as claimed in independent claim 1. The preceding discussion of long felt need applies equally against this rejection.

(d) Rejection of claims 19 and 20 as obvious over Boeck in view of Murier.

The Final Office Action rejected claims 19 and 20, which are dependent on claim 17 and are directed to a connector for block faces, under 35 U.S.C. § 103(a) over Boeck in view of Murier. It is respectfully submitted that this rejection should be withdrawn, because the combination fails to teach or suggest each claim element.

- (1) **The obviousness rejection based on Boeck in view of Murier should be withdrawn because the cited combination fails to disclose various elements of claims 19 and 20, including the connective structure's "compressible element" and its being "free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure."**

The Final Office Action asserts that Boeck teaches or suggests all the limitations of claims 19 and 20, which are directed to a connective structure, except the insert type connector being generally V-shaped for a dovetail-shaped connector formation. However, as previously explained in preceding section (ii)(a)(1), Boeck discloses "[a] concrete form system in which a plurality of **foam panels are interlocked transversely, horizontally, and vertically** by a plurality of connectors." Boeck, abstract (emphasis added). Thus, in contrast to claims 19 and 20, which depend on independent claim 17, Boeck does not disclose a connector used for a **"discrete, preassembled, composite block unit for independent placement as a unit."** Also, Boeck is a form system for poured concrete and makes no mention of forming a "mortared, masonry wall structure," as recited in base claim 17. Again, unlike claim 17, Boeck's form walls are made of foam and are not "load-bearing."

References are now made to those portions of Boeck quoted in the previous discussion of claims 17, 21 and 24 in preceding section (ii)(a)(1). These references show that Boeck's connector is used to interlock vertically adjacent wall panels and that, as stated in Boeck, **"a single full size connector can be used to interconnect as many as eight panels transversely,**

horizontally and vertically.” Boeck, col. 6, ll. 29-31 (emphasis added). Thus, as previously demonstrated above, it is clear that Boeck does not disclose a connective structure that is **“free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure,”** in contrast to claims 19 and 20, which depend on independent claim 17 where this feature is recited.

Murier does not cure this deficiency with its connector teaching. As indicated in Fig. 1 of Murier, the Murier connector “C” straddles across the abutting ends of two adjacent block units. Thus, Murier also fails to disclose a connective structure that is **“free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure.”**

With respect to the configuration of the connectors, Boeck’s connector, as illustrated in FIG. 4, has **“planar members 30, 32, 34, 36”** for insertion into the passages 58 in the expanded polystyrene foam panels 10, 12, 14, 16. Boeck, col. 3, ll. 50-52; col. 4, ll. 60-64; FIGS. 1, 4 & 5 (emphasis added). These “planar members” simply slide into the passages in the foam panels. Boeck’s “planar elements” are not compressed. Thus, Boeck does not disclose **each connector with a compressible element**, as recited in independent claim 17.

Murier also does not correct the teaching deficiencies of Boeck relative to the connector features of claims 19 and 20. First, Murier’s connectors are shaped like an “E” in profile. See Murier Fig. 1. In addition, they grasp surface protrusions at the edges of the opposed faces they join. Thus, Murier’s connectors lack the following:

1. “a compressible element for insertion into and frictional engagement with one of said first and second walls” (per claim 17)

2. “an insert-type connector for a dovetail-shaped connector formation in the first or second wall” (per claim 19)

3. “the insert-type connector is generally V-shaped” (per claim 20)

In sum, the Boeck and Murier combination cited does not disclose the connector structures as recited in claims 19 and 20 (including their base claim 17). For at least these reasons, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness against claims 19 and 20.

(e) Rejection of claims 45, 46, 48, 49 and 51 as obvious over Stewart in view of Nehring.

The Final Office Action rejected claims 42, 43, 48, 49 and 51 under 35 U.S.C. § 103(a) over Stewart in view of Nehring. Because claims 42 and 43 were previously canceled, and previously added claims 42-49 were mis-numbered when submitted and were renumbered to 45-52 in the Final Office Action, it is assumed this rejection was intended to pertain to claims 45 and 46 instead of claims 42 and 43. Consequently, this brief responds to the rejection as one rejecting claims 45, 46, 48, 49 and 51 as being obvious over Stewart in view of Nehring. It is respectfully submitted that this rejection should be withdrawn, because the combination fails to teach or suggest each claim element.

- (1) **The obviousness rejection based on Stewart in view of Nehring should be withdrawn because the combination fails to teach a method that includes providing walls, at least one of which has a mortar joint surface, providing a connective structure free of direct structural connection to adjacent blocks, providing a block for independent placement, and other aspects of the claims.**

The rejected claims are directed to a method of making a discrete, pre-assembled composite block unit, generally corresponding to use of the connector of claim 17. The presently addressed rejection asserts that “Stewart Jr. as modified by Nehring shows all the claimed limitations,” and that the “claimed method steps of making a discrete pre-assembled composite block unit would have been the obvious method steps of making Stewart Jr. modified structures.” Final Office Action, page 8, para. 10.

The statement of rejection offers no specific instruction on how any methods of block making taught in Stewart would be modified by Nehring. Therefore, it is assumed the Examiner meant that Stewart would be structurally modified by Nehring as was explained in the preceding obviousness rejection of claims 1, 12 and 13, based on the combination of Stewart and Nehring (i.e., paragraph 7 of the Final Office Action). Consequently, Appellant addresses the presently addressed rejection as if it contained the reasoning from paragraph 7 of the Final Office Action.

As explained in preceding section (iii)(c)(1), Stewart discloses a system of tiles that may be connected to form a wall into which concrete may be poured. Stewart, p. 1, col. 1, ll. 14-31; Fig. 1. The tiles, such as the side and corner pieces 10, 16, make up the outside surfaces of the wall. Stewart, p. 1, col. 1, ll. 31-34; Fig. 1. The side pieces 10, 16 are maintained in position relative to each other via a series of cross pieces 12, tie bars 20, and braces 15, 15a, 15b. **In Stewart, it is the cross pieces 12, 20 that “tie the opposite side pieces firmly together,” not the braces 15, 15a, 15b.** Stewart, p. 1, col. 1, ll. 48-49; Fig. 1 (emphasis added).

As was pointed out in preceding section (iii)(c)(1), Stewart shows a connection system in which connectors 12, 20 are used to connect face tiles 10, 16, 19 at the seams of laterally adjacent face tiles 10, 10 or 10, 19 or 10, 16. In the method context, this means Stewart teaches joining laterally adjacent blocks with the connectors 12, 20, as shown in Stewart's Figs. 1 and 6. The borrowing of Nehring's asserted teaching of a non-masonry connector still fails to negate Stewart's teaching that adjacent blocks are connected via a connector that connects to each of two laterally adjacent faces. Also, neither Stewart nor Nehring teaches or suggests a compressible connector. Thus the cited combination fails to meet the language of claim 45, which recites, "[a] method for making a discrete, preassembled, composite block unit for independent placement as a unit with other laterally and vertically adjacent block units ...comprising: ... providing a connective structure ... connected between the first and second walls, said connective structure having at least two connectors; connecting each of the connectors to one of the first and second walls, by **compressing such connector** into frictional engagement within a connector formation in said one of the first and second walls, such that **prior to placement of the block unit in a wall structure ... , the first and second walls are securely positioned with respect to one another as opposite faces of a discrete, substantially rectangular block placeable as a unit ... with the connective structure being free of direct, structural connection to any wall of each adjacent block unit when the block unit is in a wall structure.**"

Nehring fails to remedy Stewart's inadequacies in this respect. Therefore, it is respectfully submitted that the Final Office Action fails to establish a prima facie case of obviousness against independent claim 45 and its dependent claims 46, 48, 49 and 51.

Claim 49, which is dependent on claim 45, is directed to a particular step in forming the connective structure using a center arm and connecting it at the top surface of the first and second block walls. Such a location facilitates use of that arm as a handle graspable by a mason. Again, the asserted combination of references falls short. With respect to dependent claim 49, Stewart and Nehring do not teach or suggest “providing a center arm” and “installing such center arm **between and flush with a top surface** of the first and second walls,” as recited in claim 49. Thus, there are additional grounds for withdrawing this rejection.

- (2) **The long felt but unresolved need for a method of making a masonry unit that offers enhanced finished wall performance while using conventional installation strongly indicates the nonobviousness of Appellant's invention.**

As explained in section (iii)(a)(3) of this brief, there has been a long felt but unsolved need for a masonry block methodology that offers enhanced finished wall performance while using conventional block installation. More specifically, there has been a long-felt but unsolved need for a masonry block methodology that decreases the need for veneer or double wall construction and allows the strength of a poured concrete wall, the aesthetic appearance of a masonry block wall, and the ability to build such a wall using traditional masonry block methods. These needs have been addressed by Appellant's invention as claimed in independent claim 45 and its dependent claims. The preceding discussion of long felt need applies equally against this rejection.

- (iv) Allowable Subject Matter - Claims 6-9, 15 and 18.

- (a) **For at least the reasons stated in the Final Office Action, Appellant asserts that the objected to claims contain allowable subject matter.**

The Final Office Action objected to claims 6-9, 15 and 18 as being dependent upon a rejected claim, but being allowable if rewritten into independent form to include all of the

limitations of their respective base and intervening claims. The Examiner stated that these claims had allowable subject matter because the prior art does not show a connective structure having two end arms and a center arm, the center arm being vertically displaced with respect to the end arm in combination with other claimed limitations. The Examiner also stated that these claims had allowable subject matter because the prior art does not show the block unit having a center form having sides facing the walls, the at least one arm projecting from either side of the center form, each arm having a connector, and the projection length of the at least one arm being not equal to the projection length of the other at least one arm in combination with other claimed limitations. For at least the reasons stated by the Examiner, the Appellant believes these claims have allowable subject matter. However, for the reasons stated above, Appellant also asserts that the other rejected claims in this case are also allowable.

Conclusion

In light of the foregoing, the Appellant submits that the appealed claims meet the requirements for patentability. Therefore, the Appellant respectfully requests that the Board reverse and withdraw each of the rejections.

Respectfully submitted,

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